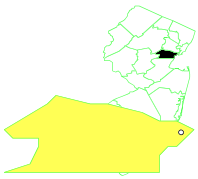
CHEMICAL CONTROL CORPORATION

NEW JERSEY

EPA ID# NJD000607481



EPA REGION 2
CONGRESSIONAL DIST. 13
Union County
Elizabeth

Site Description

The Chemical Control Corporation (CCC) site consists of a 2-acre parcel of land adjacent to the Elizabeth River. The site area, formerly a marsh, is flat and barely above sea level. The surrounding area is mostly industrial. From 1970 to 1978, CCC operated as a hazardous waste storage, treatment, and disposal facility, accepting various types of chemicals including: acids, arsenic, bases, cyanides, flammable solvents, polychlorinated biphenyls (PCBs), compressed gases, biological agents, and pesticides. Throughout its operations, CCC was cited for discharge and waste storage violations. In 1979, the State of New Jersey initiated a site cleanup that included removal of bulk solids and liquids, drums at and below the soil surface, gas cylinders, infectious wastes, radioactive wastes, highly explosive liquids, debris, tanks, and 3 feet of soil. Excavated soil areas were replaced with a 3-foot gravel cover. An explosion and fire in 1980 interrupted the site cleanup and created additional cleanup needs; the site was completely destroyed and reportedly, drums of burning waste launched into the air. Contaminated runoff from fire fighting efforts entered the Elizabeth River. After the fire and explosion, the preliminary cleanup was accelerated and was completed in 1981. There are approximately 14,250 residents within 1 mile of the site. One residence is located within 200 feet of the site, and densely populated neighborhoods are located across the Elizabeth River.

Site Responsibility: This site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 10/01/81
Final Date: 09/01/83

Threats and Contaminants

The sediments of the Elizabeth River and the on-site soils were contaminated with volatile organic compounds (VOCs), pesticides, acid and base/neutral extractables, and metals. The subsurface soil was contaminated with VOCs. Eating contaminated fish, shellfish, crabs, and other marine organisms and direct contact with sediments in the Elizabeth River may be potential health threats. Other industrial pollution sources in the area may contribute to contamination in the Elizabeth River. The site is located near

estuaries and critical habitats for estuarine fauna; these areas could be threatened by contaminated waters and sediments.

Cleanup Approach

The site cleanup was addressed in three stages: immediate actions and two long-term remedial phases directed at controlling the source of contamination and cleanup of the entire site.

Response Action Status

Immediate Actions: The EPA performed immediate actions at the site to ensure human and environmental safety. These actions included: (1) packing gas cylinders in safe containers and installing additional pressure gauges on them; (2) removing and decontaminating 11 box trailers and one vacuum truck; (3) clearing plugged storm sewers; (4) sampling and removing 187 gas cylinders that were left at the site and one taken from the Elizabeth River; (5) designing a device used for sampling and compressing gases into new cylinders; (6) performing a limited site investigation and a focused evaluation of the alternatives for cleanup to confirm reports that drums from the site had entered the river; and (7) removing all the containers that were found adjacent to the site.

Source Control: After performing the immediate actions described above, EPA installed new cylinder gauges, reconstructed storm sewer catch basins and grates, constructed curbing to prevent runoff of contaminated sediments, and decontaminated five box trailers. Harmless gases were vented, while certain easily treated gases were neutralized on site. Dangerous gases were shipped off site for proper disposal. EPA transported all hazardous materials generated by these cleanup actions to a federally approved disposal site. All activities for this stage of site cleanup were completed by 1990.

Entire Site: EPA selected a final remedy for the site soils. The cleanup technologies chosen in a 1987 Record of Decision to address contaminated soil on site include: (1) combining the contaminated soil with a solidification agent that will harden so that the contaminants cannot migrate from the site; (2) removing debris from earlier cleanup actions, including water collected while installing monitoring wells, items recovered from the Elizabeth River under the initial cleanup action, used disposable equipment, and the decontamination pad; (3) sealing the sanitary sewer line under the site where it connects to the South Front Street storm sewer; (4) repairing the berm that separates the site from the Elizabeth River; and (5) collecting and analyzing environmental samples to ensure the effectiveness of the remedy, including an periodic evaluation to assess protectiveness of public health and the environment.

Site Facts: In January 1979, the State, through litigation, forced the company to cease

operations. In 1990, EPA and 179 potentially responsible parties signed a Consent Decree, under which the parties agreed to design the remedy selected in EPA's Record of Decision and perform the remaining cleanup activities at the site. The Consent Decree was entered into federal court in November 1991.

Cleanup Progress

Construction Complete

The EPA has performed numerous immediate actions at the Chemical Control Corp. site which greatly reduced the potential for exposure to hazardous materials on the site and eliminated the sources of contamination. Construction of the final remedy for the site was initiated in August 1993 and completed in December 1993. As described above, the remedy called for solidification of the soils with a mixture of concrete, down to the underlying clay layer. In addition, a slurry wall, anchored to the underlying clay layer, was constructed around the perimeter of the site. Approximately 25,000 cubic yards (40,000 tons) of soil was solidified within the slurry wall. The solidified soils were graded and covered with clean gravel. An 8 foot chain-linked fence was placed around the site to restrict unauthorized access. The site is currently being monitored. EPA's monitoring program focuses primarily on ground water sampling and analyses to evaluate the effectiveness of the remedy. Based on the monitoring results, EPA has conducted a Five-year review of the remedy, the review did not indicate any leachate emanating from the solidified mass. All three on-site monitoring wells were sampled for vinyl chloride and 2-butanone, the indicator parameters for the site. Two of the three monitoring wells, indicated sharp reductions in the concentrations for the indicator parameters, since construction of the remedy. Contamination in the other well, well CW-1 saw similar reductions after completion of the remedy, but the levels have not dropped off further. In order to determine why CW-1 reduction is less than the other wells, the responsible parties undertook a soil sampling effort within the vicinity of well CW-1. The results of this study indicates that some of the contamination found in the wells resulted from residual soils that were not remediated during the remedial action. These soils are located outside of the slurry wall, in a narrow area on the bank of the Elizabeth River. EPA and the PRPs are currently expolring the possibility of using in-situ bio-remediation to remediate this area.